

101730

May-13-13 1:13:01 PM

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: Bearpaw, 206

Start Date: 5/15/13 **Start Qty:** 4.00 ***4***

Cust Item ID:

Required Date: 5/31/13 **Req'd Qty:** 4.00 ***A***

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan: MLJ Date: 13-05-14 Tooling: _____ Date: _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): ☒ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr _____ Revision Nbr _____

D2435 Rev E1

120	0.00
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120

FLOW WATER JET

Waterjet	Memo	0.00
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FLOW CNC Waterjet

130	0.00
-----	------

130

HAAS CNC VERTICAL MACHINING #1

HAAS I	Memo	0.00
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HAAS CNC vertical machine #1

1-Inspect material for defects or damage prior to machining
2-Machine as per Folio FA789 and Dwg D2435 Identify as D2435
3-Deburr

140	QC2- Inspect parts off machine FAI/FAIB	0.00
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140

QC	Memo	0.00
----	------	------

Quality Control

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Work Order ID 101730

101730

Page 2

May-13-13 1:13:01 PM

Item ID: D2435

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Bearpaw, 206

Start Date: 5/15/13 Start Qty: 4.00 *4*

Cust Item ID:

Required Date: 5/31/13 Req'd Qty: 4.00 *4*

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC8- Inspect parts - second check	0.00							
150									
QC	Memo	0.00							
Quality Control									
151	Identify as per dwg & Stock Location: _____	0.00							
151									
Packaging	Memo PPP103574	0.00							
Packaging									
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

13/7/10 (4)

13/7/10

13-07-10

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabelled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
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		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

Picklist Print

May-13-13 1:13:00 PM

Page 1

Work Order ID: 101730
 Parent Item: D2435
 Parent Item Name: Bearpaw, 206

Start Date: 5/15/13

Required Date: 5/31/13

Start Qty: 4.00

Required Qty: 4.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10 UHMW 1" Black		Purchased	No			120	sf	1,130.5550	3.2	12.8			
											12.8	13.06.08	
				Location	Loc Qty	Loc Code							
				MAT019	1130.554989								
				121278	12.0949895								
				122575	47.6								
				123229	53								
				123704	63.8								
				123949	6.96								
				124382	209.5								
				124758	337.6								
				125137	400								
										124758			

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

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Supplier									
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FAULT CATEGORY

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		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

DART AEROSPACE LTD		Work Order:	101730
Description: Bearpaw		Part Number:	D2435
Inspection Dwg: D2435	Rev: E1	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.063 x 45°	+0.030/-0.010	.077			DR.05	6" VERN
B	5.500	+/-0.030	5.501			DR.05	6" VERN
C	0.200	+/-0.030	.197			DR.13	DEPTH GAUGE
D	R0.250	+/-0.030	.250				RADIUS GAUGE
E	0.250	+/-0.010	.248			DR.05	6" VERN
F	0.625	+/-0.030	.629			DR.05	6" VERN
G	0.25 x 45°	+/-0.030	.275			DR.05	6" VERN
H	0.375	+/-0.010	.374				SHOP THOMAS MILL
I	19.000	+/-0.030	19.005			HAAS 1	CNC
J	0.950	+0.030/-0.010	.949			DR.05	6" VERN
K	Ø0.260	+0.005/-0.000	min -.005				PIN GAUGE
L	Ø0.930	+/-0.030	.930			DR.05	VERN 6"
M	0.30	+0.030/-0.000	.310			DR.05	VERN 6"
N	0.375	+/-0.030	.374			DR.05	VERN 6"
O	7.375	+/-0.030	7.380			DR.08	12" VERN
P	4.250	+/-0.010	4.251			DR.05	6" VERN
Q	2.000	+/-0.030	2.001			DR.05	6" VERN
R	9.000	+/-0.010	9.001			DR.08	12" VERN
S	15.750	+/-0.030	15.755			HAAS 1	CNC

Measured by:	DR. / D.A.
Date:	13/07/09

Audited by:	U.S. 9-83
Date:	13-7-10

Prototype Approval:	N/A
Date:	

Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue P/O K10007	KJ/RF	

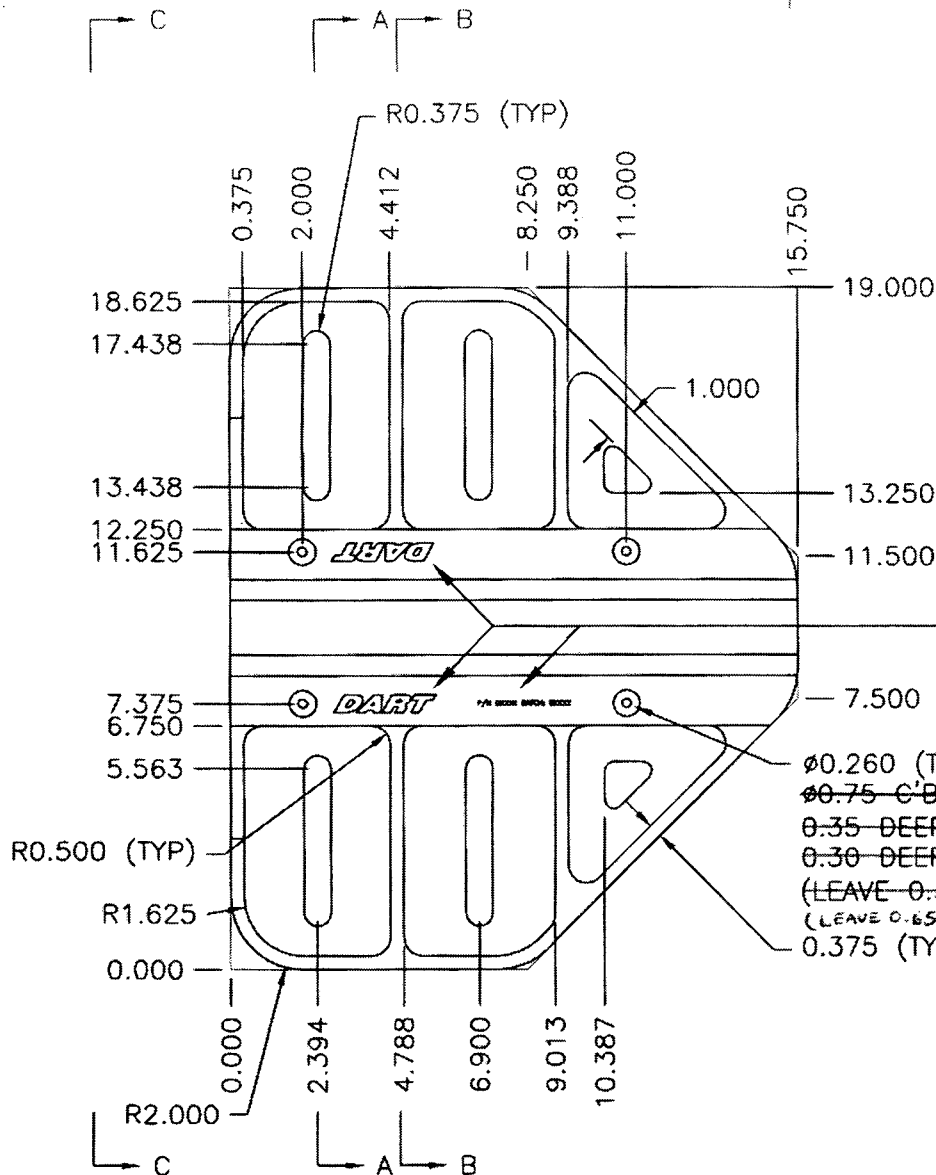


RELEASED
19 06 17 KE

DESIGN	DRAWN BY	DART AEROSPACE LTD
KE	KE	HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
KE	KE	D2435
DATE	TITLE	SHEET 1 OF 2
98.05.19	BEARPAW	SCALE
		1:5

A	96.01.24	NEW ISSUE
B	96.03.26	CHANGE BORE AND C'BORE DEPTH
C	97.05.07	CHANNEL & C'BORE DEPTH CHANGED
D	97.10.17	R1.5 BORE WAS R2.637 (TSR A469)
E	98.05.19	CHANGE C'BORE, R1.58 WAS R1.50

ENGRAVE LOGO TO MAX DEPTH OF 0.012. ENGRAVE PART AND BATCH NUMBERS TO MAX DEPTH OF 0.010. (TYPICAL LOCATION AS ILLUSTRATED)



Ø0.260 (TYP) Ø0.93 C'BORE
Ø0.75 C'BORE 0.30 DEEP FROM BOTTOM
0.35 DEEP FROM TOP (MIN.)
0.30 DEEP FROM BOTTOM
(LEAVE 0.300 MIN.)
(LEAVE 0.650 MIN.)
0.375 (TYP)



9143

EFFECTIVE DEOS

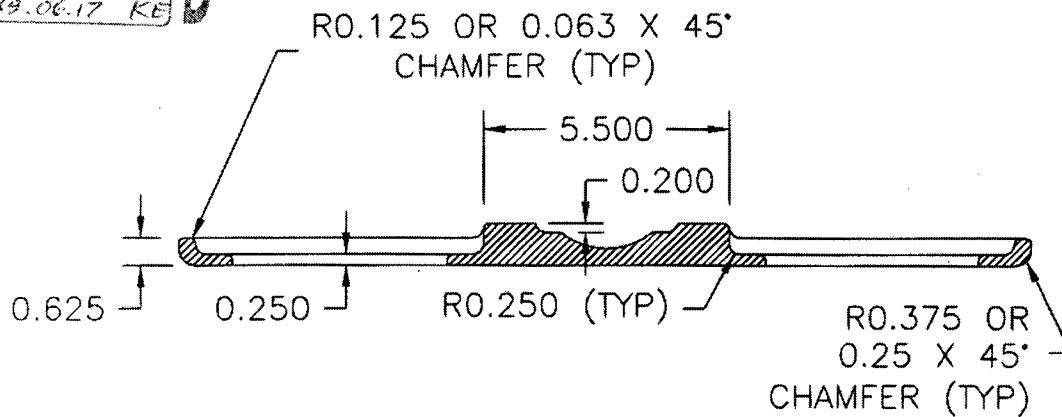
101730
MCJ
13-05-14

MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689
1.00 THICK (MACHINE TO 0.950)

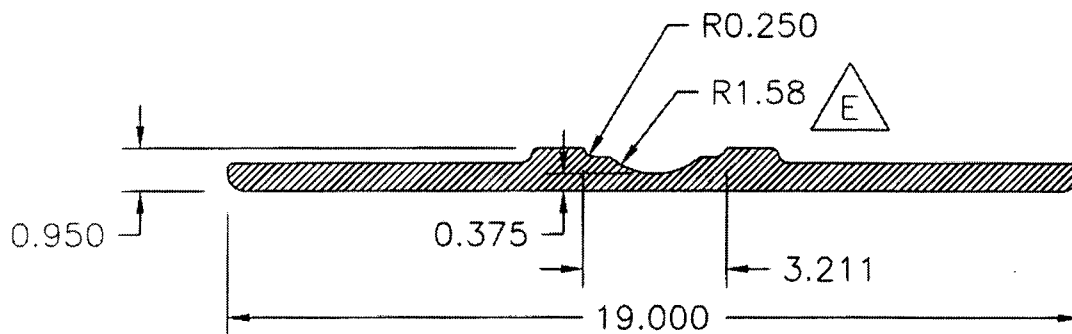


DESIGN KE	DRAWN BY KE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED BDB	APPROVED [Signature]	DRAWING NO. D2435	REV. E SHEET 2 OF 2
DATE 98.05.19		TITLE BEARPAW	SCALE 1:4

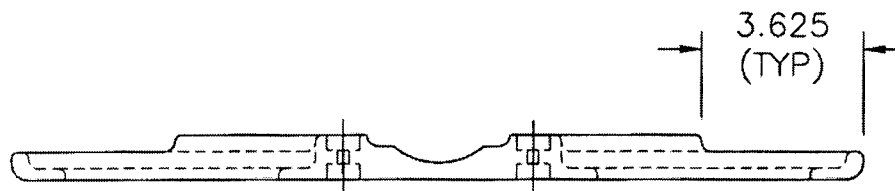
RELEASED
99.06.17 KE



SECTION A-A



SECTION B-B



SECTION C-C

101730